In the United States Court of Federal Claims

No. 14-513
(Filed under seal: 6 April 2020)
(Reissued: 23 June 2020[*])

THALES VISIONIX, INC.,	*	
	*	
Plaintiff,	*	
	*	Patent Infringement; Motion to Compel
v.	*	Production of Source Code; RCFC 26(b)(1).
	*	
THE UNITED STATES,	*	
	*	
Defendant,	*	
	*	
and	*	
	*	
ELBIT SYSTEMS OF AMERICA, LLC,	*	
	*	
Third-Party Defendant.	*	
	*	

Meredith Martin Addy, AddyHart P.C., of Atlanta, GA, with whom were *Daniel I. Konieczny* and *Katherine M. O'Brien*, Tabet DiVito & Rothstein LLC, both of Chicago, IL, for plaintiff.

Carrie Rosato, Trial Attorney, Commercial Litigation Branch, Civil Division, Department of Justice, with whom were *Joseph H. Hunt*, Assistant Attorney General, *Gary L. Hausken*, Director, and *Scott Bolden*, of counsel, all of Washington, DC, for defendant. *Andrew P. Zager*, Department of Navy, of Washington, DC, of counsel.

[*] This order was originally filed under seal and the parties were given the opportunity to propose redactions no later than 16 April 2020. In lieu of proposed redactions, on 16 April, third-party defendant Elbit Systems of America, LLC ("Elbit") filed an unopposed motion to temporarily maintain this order under seal. *See* Mot. to Temporarily Maintain Order Under Seal, ECF No. 144. Elbit indicated that due to the current health pandemic, all of their physical office locations were closed. *Id.* In order to comply with the various protective orders and export control licenses in this case, the parties were limited in the physical locations in which they could review documents containing any sensitive and protected information, thus prohibiting the parties from reviewing the order in detail to propose redactions. *Id.* After convening with the parties on two separate occasions to discuss these logistical concerns, the Court granted Elbit's motion in part, giving the parties until 19 June 2020 to file proposed redactions. *See* Order, ECF No. 149. The parties proposed extensive redactions. Following a status call with the Court on 22 June 2020, the parties agreed to a final redacted version of the Court's 6 April order. The Court accepts the parties' proposed redactions and reissues the order, with redacted language replaced as follows: "[XXXXX];" and redacted images replaced with a blank box.

Kurt G. Calia, Covington & Burling LLP, of Palo Alto, CA, with whom were *Ranganath Sudarshan*, *Matthew Kudzin*, and *Rajesh Paul*, Covington & Burling LLP, all of Washington, DC, for third-party defendant Elbit Systems of America, LLC.

OPINION AND ORDER

HOLTE, **Judge**.

Plaintiff accuses the government of infringing a single United States patent. The government noticed various third-parties associated with the development of the technology. One of the third-parties, Elbit Systems of America, LLC ("Elbit"), responded to the notice and joined the case. Numerous motions are fully briefed and currently pending before the Court. Among the pending motions is plaintiff's motion to compel the production of certain technical documents and source code from third-party defendant Elbit. Following a status conference, the Court ordered the parties to meet and confer to attempt to resolve the present discovery dispute. The Court then ordered plaintiff to submit supplemental discovery requests. No resolution was reached. The Court held oral argument on plaintiff's motion to compel 10 January 2020. For the following reasons, plaintiff's motion to compel is **GRANTED-IN-PART** and **DENIED-IN-PART**.

I. Overview

Plaintiff Thales Visionix, Inc. is the owner of U.S. patent no. 6,474,159 (the '159 patent). Compl. ¶ 11. The '159 patent relates to technology regarding the "inertial tracking of objects for head mounted displays," such as those used by aircraft pilots. *Id.* ¶¶ 4, 12. Conventional systems used in inertial tracking typically "measure head motion relative to a reference frame that is stationary relative to the ground." *Id.* ¶ 12. The '159 patent, however, relates to a system "using inertial trackers to track motion relative to a moving platform instead of relative to the earth." *Id.*

Conventional motion tracking systems use an inertial sensor mounted on the tracked object and another mounted on the moving reference frame, such as the aircraft. Pl.'s Mot. to Compel ("Mot. to Compel") at 2, ECF No. 108. "Inertial sensors measure linear accelerations or rotation rates with respect to the reference frame of the earth." *Id.* The linear accelerations or rotation rates are integrated to reveal the orientation of the object relative to the earth. *Id.* The difference between these values reveals the relative orientation or position of the respective sensors. *See id.* The helmet-mounted display system ("HMDS") of the '159 patent is synchronized with changes in the helmet's orientation based upon the "orientation of the tracked object relative to the moving reference frame," rather than relative to the earth. Compl. ¶ 13. "[T]he system determines a 'relative' angular rate or acceleration signal from the sensors, and then integrates that relative signal to determine the orientation or position of the helmet relative to the aircraft." Mot. to Compel at 2–3. For purposes of differentiating the two methods of motion tracking, the conventional systems are hereinafter referred to as the "old method," while the systems of the '159 patent are referred to as the "new method."

Plaintiff accuses the government of infringing the '159 patent by utilizing systems covered by the "new method" in the F-35 Joint Strike Fighter tactical fighter jet. *Id.* at 2. The government notified Elbit as a subcontractor involved in the development of various components implicated in plaintiff's infringement allegations, including providing the "magnetic, optical, and inertial sensors used in the helmet for the F-35 Joint Strike Fighter." Third-Party Def. Elbit Systems of America's Opp'n to Pl. Thales Visionix, Inc.'s Mot. to Compel ("Resp. to Mot. to Compel") at 3, ECF No. 110; *see also* Motion to Notice Third Party Elbit Systems of America, LLC, ECF No. 10. Specifically, Elbit possesses the complete source code for the HMDS, which is "the software that calculates the position and orientation of the helmet. . . . The source code does not merely describe how the system works, it is the actual, operative computer code used in the F-35." Resp. to Mot. to Compel at 7 (emphasis omitted). Elbit maintains "every version of the software ever installed in an F-35" on an internal "source code repository . . . located and maintained in Israel." *Id.* at 19–20 (emphasis omitted). Source code maintained on the repository is not withdrawn absent a specific need for access to the source code. *See* Tr. at 134:24–135:1, ECF No. 142 ("All of the source code that has been produced in this case has never before entered the United States.").

II. Procedural History

Plaintiff filed its complaint on 16 June 2014. *See* Compl. Along with answering the complaint on 14 October 2014, *see* Def.'s Answer, ECF No. 11, the government also motioned to notify a series of interested parties based upon their involvement in the development of the accused systems. *See* Mot. to Notice Third Party Lockheed Martin, ECF No. 8; Mot. to Notice Third Party Rockwell Collins, ECF No. 9; and Mot. to Notice Third Party Elbit Systems of America, LLC, ECF No. 10. This Court granted each of the government's motions to notify interested third parties on 16 October 2014, *see* Order, ECF No. 12, and notice was issued on 17 October 2014. *See* Notice, ECF No. 13. Of the noticed third parties, only Elbit joined the case, filing an answer to the complaint on 9 December 2014. *See* Elbit Systems of America, LLC's Answer and Affirmative Defenses to Pl. Thales Visionix, Inc.'s Compl., ECF No. 16. On 27 March 2015, the government and Elbit jointly moved for judgment on the pleadings pursuant to Rule 12(c) of the Rules of the Court of Federal Claims ("RCFC"). *See* Mot. for J. on the Pleadings Under RCFC 12(c) Filed by the United States of America and Elbit Systems of America, ECF No. 29.

The government and Elbit's joint motion for judgment on the pleadings argued the claims of the '159 patent are "invalid as a matter of law because they claim a patent-ineligible law of nature in violation of 35 U.S.C. § 101." *Id.* at 1. This Court granted the defendants' joint motion, dismissing plaintiff's complaint on the pleadings and finding the '159 patent invalid for claiming patent-ineligible subject matter under § 101. *See Thales Visionix, Inc. v. United States*, 122 Fed. Cl. 245, 257 (2015). Plaintiff appealed this decision to the Federal Circuit. On 8 March 2017, the Federal Circuit reversed this Court's decision invalidating the claims of the '159 patent and remanded the case for further proceedings. *See Thales Visionix Inc. v. United States*, 850 F.3d 1343, 1349 (Fed. Cir. 2017). The Federal Circuit found the claims of the '159 patent "are not directed to an abstract idea," but rather "specify a particular configuration of inertial sensors and a particular method of using the raw data from the sensors in order to more accurately calculate the position and orientation of an object on a moving platform." *Id.*

Elbit further filed a petition for *inter partes* review of the '159 patent with the Patent Trial and Appeal Board ("PTAB"), arguing the '159 patent was "obvious over U.S. Patent No. 4,722,601 ("McFarlane") in combination with two other prior art references." *Elbit Sys. of Am., LLC v. Thales Visionix, Inc.*, 881 F.3d 1354, 1355 (Fed. Cir. 2018). The PTAB issued a final written decision on 14 October 2016 invalidating some, but not all, of the claims of the '159 patent under 35 U.S.C. § 103. *Id.* Elbit appealed the PTAB's decision to the Federal Circuit. *Id.* On remand from the Federal Circuit's original decision in *Thales Visionix, Inc. v. United States*, this Court stayed proceedings "pending the resolution of the appeal of the *inter partes* review decision." *See* Stay Order, ECF No. 73. The Federal Circuit affirmed the PTAB's decision, finding "Elbit failed to demonstrate by a preponderance of the evidence" that certain claims of the '159 patent "would have been obvious over [McFarlane] in combination with two other prior art references." *Elbit Sys. of Am.*, 881 F.3d at 1355. This Court lifted the stay of proceedings on 6 April 2018. *See* Order Lifting Stay, ECF No. 75.

The parties resumed proceedings in April 2018 and filed a joint status report addressing discovery proceedings. *See* Joint Status Report, ECF No. 76. On 15 June 2018, in place of customary discovery proceedings, Elbit took the unconventional step of serving plaintiff with a memorandum alleging noninfringement of the remaining claims of the '159 patent following the Federal Circuit's affirmance of the PTAB's decision. *See* Third-Party Def. Elbit Systems of America's Mot. for Summ. J. ("Mot. for Summ. J.") at Ex. A, ECF No. 107 (Ex. A is hereinafter referred to as the "Noninfringement Memo"). This Court then ordered Elbit to provide plaintiff with "all relevant technical documents that support the memorandum" and for plaintiff to "complete review of the memorandum and supporting documents, and restate or update its remaining claims of infringement." Order, ECF No. 82. The parties engaged in lengthy settlement discussions, keeping the Court apprised of their progress by filing periodic joint status reports. *See, e.g.*, Joint Status Report, ECF No. 87; Joint Status Report, ECF No. 90; Joint Status Report, ECF No. 95. Settlement negotiations broke down sometime in summer 2019, after which the parties filed respective motions seeking relief. This case was transferred to the undersigned Judge on 29 July 2019. *See* Order, ECF No. 105.

On 6 August 2019, plaintiff filed a motion to compel, seeking the production of source code for various software components associated with the F-35 HMDS, in addition to various related technical documents. *See* Mot. to Compel. Elbit filed its response on 20 August 2019. *See* Resp. to Mot. to Compel. On 13 September 2019, plaintiff filed its reply in support of its motion to compel. *See* Plaintiff Thales Visionix, Inc.'s Reply in Supp. of Mot. to Compel ("Reply in Supp. of Mot. to Compel"), ECF No. 119. The government, although not directly involved in the motion to compel as either the movant or respondent, filed a paper discussing its views on the pending motion. *See* Views of the United States with Respect to Pending Motions ("Gov't Brief I"), ECF No. 124. Following the 19 September 2019 status conference, the Court ordered the parties to "meet and confer . . . regarding the additional discovery plaintiff seeks." Order at 1, ECF No. 125. The Court further ordered plaintiff to serve Elbit "with a list of interrogatories and request for additional production of documents specifically identifying the additional discovery they are seeking as a result of the . . . meet and confer." *Id.* Elbit was required to either respond or object with specificity. *Id.* The Court's order further required the parties to serve these requests and responses under seal with the Court. *Id.* at 2. On 4 October

2019, plaintiff filed its Supplemental Discovery Requests ("Suppl. Req."), ECF No. 129. Elbit filed its Notice of Objections and Responses to Supplemental Discovery Requests ("Resp. to Suppl. Req."), ECF No. 133, on 28 October 2019. The government filed a supplemental paper further discussing its views on the pending motion. *See* Further Views of the United States with Respect to Pending Motions ("Gov't Brief II"), ECF No. 135.[1]

The parties also filed various other motions. On 31 July 2019, Elbit filed a motion for summary judgment of noninfringement based upon previously provided "technical documents showing that the accused [HMDS] in the F-35 Joint Strike Fighter does not practice any of the asserted claims of U.S. Patent No. 6,474,159." Mot. for Summ. J. at 1. The following week, Elbit filed an RCFC 11 motion for sanctions against plaintiff, arguing plaintiff "does not have a good faith basis to assert that the [HMDS] used in the F-35 Joint Strike Fighter practices any of the claims of U.S. Patent No. 6,474,159." Third-Party Def. Elbit Systems of America's Mot. for Sanctions Under Court of Federal Claims Rule 11 at 1, ECF No. 111. In response to Elbit's motion for summary judgment, plaintiff filed a motion pursuant to RCFC 56(d) "respectfully mov[ing] the Court to deny or at least defer Elbit's motion for summary judgment until the Court has a full record on which to decide the issues." Thales Visionix, Inc.'s Combined Rule 56(d) Mot. to Den., or in the Alternative, Defer Elbit's Mot. for Summ. J. at 1, ECF No. 123. During the 27 November 2019 status conference, the Court indicated it will resolve plaintiff's motion to compel before the other pending motions. *See* Tr. at 56:12–63:22, ECF No. 140. Accordingly, the Court stayed "consideration of all other pending motions until resolution of plaintiff's Motion to Compel." Order at 1, ECF No. 138.

III. Factual History

According to the Federal Circuit, the '159 patent "eliminates the need to calculate an object's position relative to the ground" by mounting an Inertial Measurement Unit ("IMU") on the head mounted display "relative to a 'reference' IMU rigidly attached to the moving platform." *Elbit Sys. of Am.*, 881 F.3d at 1355 (quoting U.S. Patent No. 6,474,159 to Foxlin and Altshuler (hereinafter "'159 Patent"), at Abstract) (internal quotation marks omitted). This simplified calculation results in "improve[d] functionality when tracking on moving vehicles." *Id.* (quoting '159 Patent at col. 6:65–67) (internal quotation marks omitted). The Federal Circuit found claim 3 to be "effectively representative" of the technology of the '159 patent. *Id.* at 1356. As claim 3 depends from claim 2, which in turn depends from independent claim 1, all three claims are reproduced below:

> 1. A system for tracking the motion of an object relative to a moving reference frame, comprising:
>
> a first inertial sensor mounted on the tracked object;
>
> a second inertial sensor mounted on the moving reference frame; and

[1] Although the government's supplemental views address other motions in addition to plaintiff's motion to compel, the substance of the government's views bear on Elbit's territoriality argument presented in response to plaintiff's motion to compel. *See id.*

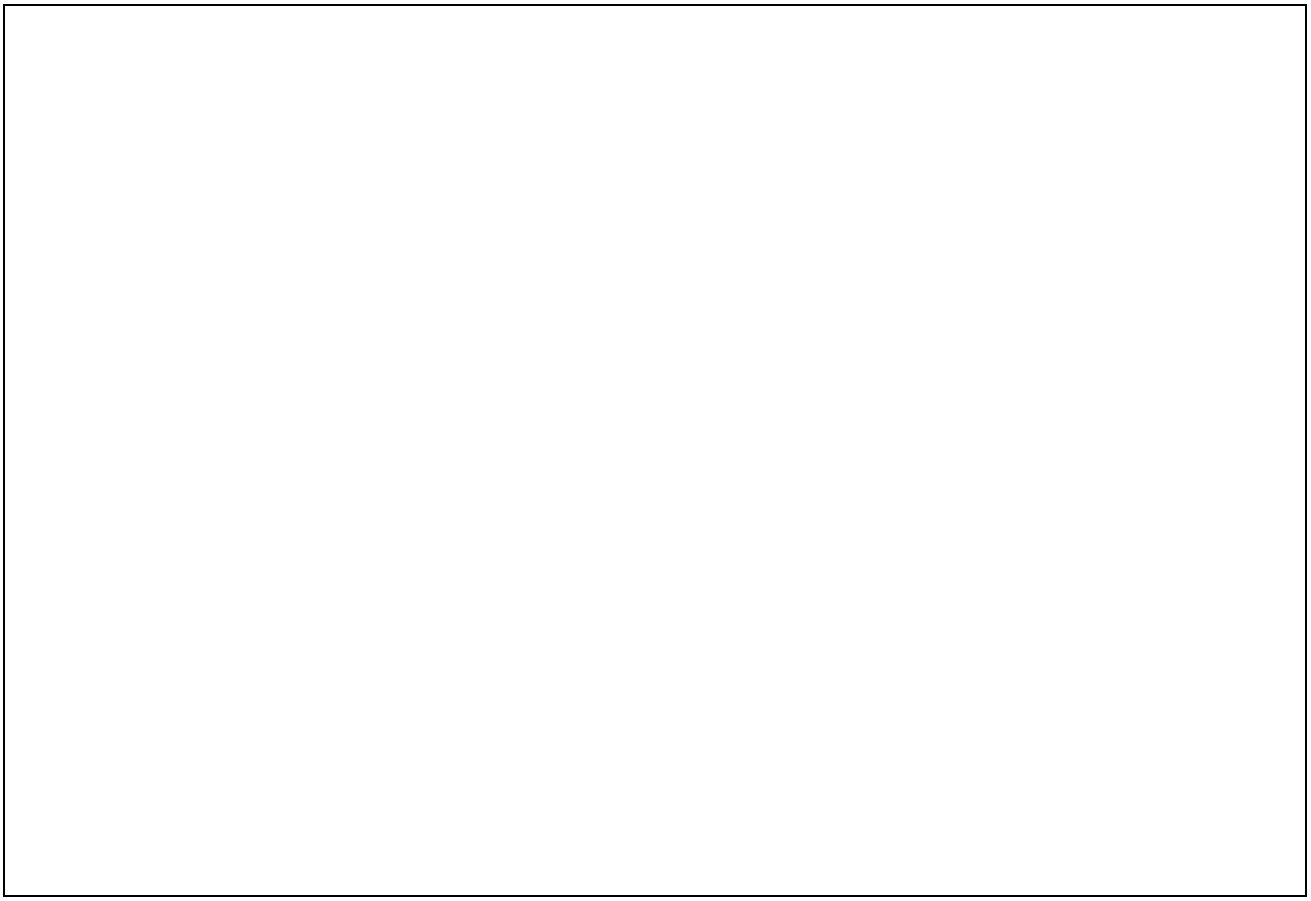
> an element adapted to receive signals from said first and second inertial sensors and configured to determine an orientation of the object relative to the moving reference frame based on the signals received from the first and second inertial sensors.
>
> 2. The system of claim 1 in which the first and second inertial sensors each comprises three angular inertial sensors selected from the set of angular accelerometers, angular rate sensors, and angular position gyroscopes.
>
> 3. The system of claim 2, in which the angular inertial sensors comprise angular rate sensors, and the orientation of the object relative to the moving reference frame is determined by integrating a relative angular rate signal determined from the angular rate signals measured by the first and second inertial sensors.

'159 Patent col. 11:49–12:2.

The *inter partes* review ("IPR") concerned whether the claims of the '159 patent were obvious in view of the prior art under 35 U.S.C. § 103(a). *Elbit Sys. of Am.*, 881 F.3d at 1356. The PTAB reviewed one prior art reference in particular, McFarlane, to determine whether the "method of integrating the 'relative angular rate signal' taught in claim 3 of the '159 patent would have been obvious to a [person having ordinary skill in the art]." *Id.* at 1357 (footnote omitted). In differentiating the "new method" of the '159 patent from the "old method" disclosed in the prior art, plaintiff's expert witness provided the following explanation of the two-step process which the "new method" follows: "the raw signal data from the inertial sensors . . . is used to determine the relative angular rate signal;" and "[t]hat relative angular rate signal . . . is then used to calculate the relative orientation." *Id.* at 1358.

Following the Federal Circuit's affirmance of the PTAB's decision in the IPR of the '159 patent, the only remaining asserted claims in the present action are: claims 3–5, 13, 24–26, and 34. *See* Noninfringement Memo at 1. According to Elbit, these claims are directed to the "new method" of computing the relative orientation of the tracked object. *Id.* Elbit argues the helmet tracking system of the F-35 does not infringe these remaining claims of the '159 patent because the system "does not integrate a relative rate signal." *Id.* [XXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXX] whereas the only remaining claims for which infringement is alleged practice the "new method." *Id.* at 2. According to Elbit, [XXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXX] Resp. to Mot. to Compel at 5–6. The HMDS of the F-35 "does not integrate a relative angular rate signal. [XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX] *Id.* at 6 (emphasis, citation, and internal quotation marks omitted). [XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXX] *See id.*

The following block diagram provides a helpful illustration of the interrelation between various modules in the HMDS:



Mot. for Summ. J., Ex. O at 5. [XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXX] *Id.*

After serving plaintiff with the Noninfringement Memo on 15 June 2018, "Elbit produced an additional 7,000 pages of documents describing the operation of the F-35 helmet tracking system" pursuant to this Court's order. Resp. to Mot. to Compel at 7. In addition, Elbit provided the operative source code for the Hybrid Tracker Software ("HTS"), which "does not merely describe how the system works, [but] is the actual, operative computer code used in the F-35." *Id.* (emphasis omitted). After reviewing the technical documents and HTS source code, plaintiff amended its infringement contentions, pursuant to this Court's order, on 1 November 2018. Mot. to Compel at 5. Rather than confirming "that the review would negate [plaintiff's] good faith basis for the lawsuit," plaintiff "confirmed [its] good faith basis for alleging infringement." *Id.* Among the documents Elbit produced was a document "containing a signal processing procedure

that infringes the asserted claims if implemented." *Id.* at 13. Plaintiff refers to this signal processing procedure as "the smoking gun" document, a term which the Court hereinafter adopts when discussing the allegedly infringing signal processing procedure; however, the Court takes no position on plaintiff's conclusions regarding the document. *See* Tr. at 124:11–13, ECF No. 142 ("[T]he reason why we call this a smoking gun is because this diagram literally shows the two signal processing steps that are found in the claims."). Elbit disagrees with plaintiff's characterization of "the smoking gun" document, describing it as merely "a single figure illustrating an algorithm that Elbit used in some early computer simulations." Resp. to Mot. to Compel at 24. Elbit "denies that the simulations practiced any of the claims of the '159 patent," and further raises jurisdictional challenges to the production of further discovery related to "the smoking gun" document. *Id.* As Elbit refused to produce any further documents related to "the smoking gun" document, plaintiff still found the production of documents and source code to be incomplete. Mot. to Compel at 6.

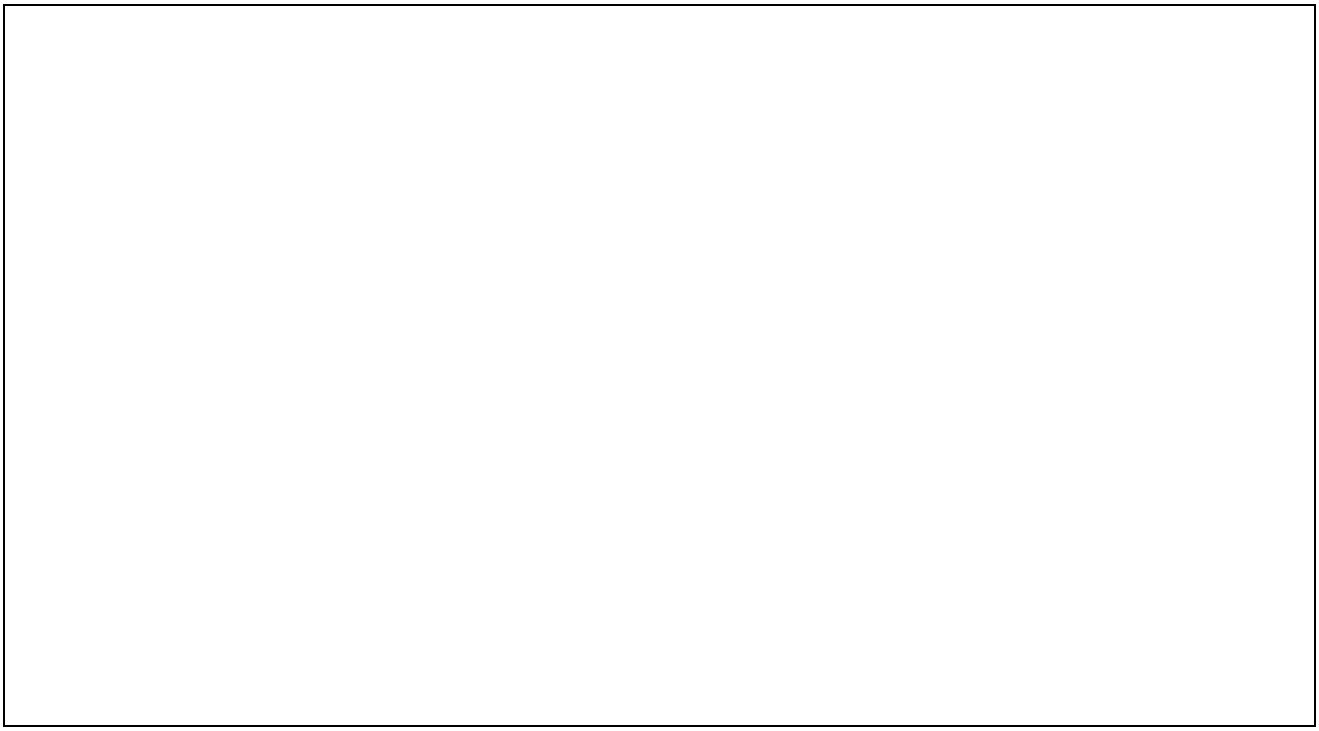
After the parties engaged in unsuccessful settlement negotiations, Elbit agreed to "produce additional source code in response to [plaintiff's] concerns about the incomplete production." *Id.* Elbit produced three additional versions of source code for the HTS in February 2019, which plaintiff again found to be incomplete for failure to include: certain previous versions of the HTS source code; source code pertaining to other modules on the HMDS; and "any additional documents relating to the infringing signal processing procedure found in the documents Elbit previously produced." *Id.* Plaintiff responded to this second production on 29 March 2019 by serving "narrow, targeted document requests seeking the production of the relevant source code and documents relating to infringement that remained missing from Elbit's production." *Id.* After initial objections on 29 April 2019, Elbit produced an additional nine versions of source code for the HTS. *Id.* Plaintiff, however, again sought the production of source code and related technical documents for additional modules of the F-35 HMDS, in addition to "documents relating to the infringing signal processing procedure found in the documents Elbit previously produced." *Id.*

Settlement negotiations thereafter resumed, but eventually broke down sometime after a status conference with this Court on 29 May 2019. The parties then filed respective motions, including plaintiff's motion to compel. After this case was transferred to the undersigned Judge on 29 July 2019, the Court attempted to restore the previous negotiations between the parties. *See* Order, ECF No. 125. The Court ordered plaintiff to serve Elbit with narrowly targeted supplemental interrogatories and document requests ("Supplemental Requests") following a meet and confer, with copies of both the Supplemental Requests and responses being filed with the Court under seal. *Id.* The Court ordered the Supplemental Requests to "specifically identify any modules alleged to use data from the inertial sensors, the basis for such allegations, and the nature of the information being requested." *Id.*

Plaintiff's Supplemental Requests contain specific allegations as to the basis for each request. For example, Supplemental Request 1 seeks the production of "source code for the HMDS Support Package ('HSP')" discussed in technical documents Elbit previously produced. Suppl. Req. at 2. Supplemental Requests 2–6 specifically target the source code of other discrete modules operating on the HMDS. *See id.* at 2–6. Supplemental Requests 7–9 request source code and technical documents related to the specific signals plaintiff identified in relation to the

calculation of orientation rates or acceleration on the HMDS. *See id.* at 6. In Supplemental Requests 10 and 11, plaintiff seeks the production of all documents related to "the smoking gun" document, or the signal processing procedure plaintiff claims infringes the '159 patent if implemented. *Id.* The final Supplemental Request, Request 12, seeks "unredacted versions of all documents previously produced . . . in redacted form." *Id.* at 7. As plaintiff's counsel stated during oral argument, the Supplemental Requests effectively modify the scope of the documents requested in plaintiff's motion to compel by narrowing the focus of the requests. *See* Tr. at 7:16–18, ECF No. 142 ("Those requests are the focus of our motion to compel, Your Honor. The supplemental document requests and interrogatory responses."). Accordingly, in resolving plaintiff's motion to compel, the Court considers the specific requests for production included in the Supplemental Requests to define the scope of the requested documents.

Plaintiff attached the declaration of its expert, Gregory Welch, PhD, to the motion to compel. *See* Decl. of Gregory F. Welch, Ph.D. in Supp. of Mot. to Compel ("Welch Decl."), ECF No. 109. Exhibit O to the Welch declaration contained the following flow diagram:



Welch Decl., Ex. O at 10. The above diagram details the flow of data through the various computer software configuration items (CSCIs) of the display management computer/helmet (DMC/H). *Id.*

Elbit responded in part to the Supplemental Requests, but also raised a number of objections. *See* Resp. to Suppl. Req. Among Elbit's objections were: the requested documents "are not in Elbit's possession, custody, or control;" the information sought "is not relevant to any claim or defense raised in this litigation;" any modules using the computed orientation or position of a pilot's helmet are outside the scope of the claims of the '159 patent; and the output

of various functions sought "is not computed directly from the raw signals from the inertial sensors and are therefore not a 'relative angular rate signal' within the meaning of the asserted claims." *Id.* at 8–10. Elbit did not produce any additional documents or source code in response to the Supplemental Requests. Tr. at 12:7–9, ECF No. 140.

IV. Standard of Review and Applicable Law

This Court's interpretation of the Rules of the Court of Federal Claims is guided by case law interpreting the Federal Rules of Civil Procedure. *See* 2002 Rules Committee Note, Rules of the United States Court of Federal Claims (as amended July 1, 2019) ("[I]nterpretation of the court's rules will be guided by case law and the Advisory Committee Notes that accompany the Federal Rules of Civil Procedure."). RCFC 26(b)(1) permits parties to "obtain discovery regarding any nonprivileged matter that is relevant to any party's claim or defense and proportional to the needs of the case. . . . Information within this scope of discovery need not be admissible in evidence to be discoverable." RCFC 34(a)(1)(A) further permits a party to request the production of "any designated documents or electronically stored information—including writings, drawings, graphs, charts, photographs, sound recordings, images, and other data or compilations—stored in any medium from which information can be obtained. . . ." Whether information is relevant "has been construed broadly to encompass any matter that bears on, or that reasonably could lead to other matter that could bear on, any issue that is or may be in the case." *Oppenheimer Fund, Inc. v. Sanders*, 437 U.S. 340, 351 (1978) (citing *Hickman v. Taylor*, 329 U.S. 495, 501 (1947)).

"Questions of the scope and conduct of discovery are . . . committed to the discretion of the trial court." *Florsheim Shoe Co., Div. of Interco, Inc. v. United States*, 744 F.2d 787, 797 (Fed. Cir. 1984). The Court of Federal Claims generally "afford[s] a liberal treatment to the rules of discovery." *Securiforce Int'l Am., LLC v. United States*, 127 Fed. Cl. 386, 400 (2016) *aff'd*, 879 F.3d 1354 (Fed. Cir. 2018), *and cert denied*, 139 S. Ct. 478 (mem.) (2018). In deciding the proper scope of discovery, "the court must be careful not to deprive a party of discovery that is reasonably necessary to afford a fair opportunity to develop and prepare the case." *Heat & Control, Inc. v. Hester Indus., Inc.*, 785 F.2d 1017, 1024 (Fed. Cir. 1986) (quoting Fed. R. Civ. P. 26(b)(1) Notes of Advisory Committee on Rules, 1983 Amendment).

"[P]atent litigation often requires the production of technical information that is highly sensitive and difficult to reproduce for production." Peter S. Menell et al., *Patent Case Management Judicial Guide* 4-5 (3d ed. 2016). When the accused device or system involves computer-related technology, such technical information may include computer source code, "often a company's most sensitive and most valuable property." *Drone Techs., Inc. v. Parrot S.A.*, 838 F.3d 1283, 1300 n.13 (Fed. Cir. 2016). "Source code is the text of a software program written in a human-readable programming language." *Blueport Co., LLC v. United States*, 533 F.3d 1374, 1377 n. 1 (citing Microsoft Computer Dictionary 491 (5th ed. 2002)). "Once written, source code is compiled into machine-readable object code that runs on a computer." *Id.* (citing Microsoft Computer Dictionary 372 (5th ed. 2002)). "Software programmers usually provide users with only the object code in order to prevent users from modifying the program." *Id.* (citing Theodore C. McCullough, *Understanding the Impact of the Digital Millennium Copyright*

Act on the Open Source Model of Software Development, 6 Marq. Intell. Prop. L. Rev. 91, 93–94 (2002)).

There are often protections put in place for the disclosure and viewing of such sensitive information. *See* Menell et al., *supra*, at 4-5–4-6. With such protections in place, there is no elevated standard when seeking the discovery of source code; a party need only satisfy the general provisions of RCFC 26(b)(1) when seeking the "discovery of the source code as relevant to its claims." *Baron Servs., Inc. v. Media Weather Innovations LLC*, 717 F.3d 907, 913 n.9 (Fed. Cir. 2013) (emphasis omitted); *see also Apple Inc. v. Samsung Elecs. Co.*, No. 11-1846, 2012 WL 1595784, at *1 (N.D. Cal. May 4, 2012) ("There is, however, no source code exception to the production requirements of [Rule] 34. And so, subject to the proportionality and burden considerations imposed by [Rule] 26, when a patentee requests source code for one or more accused products, a defendant must produce it."). In *Baron Services*, the Federal Circuit vacated the trial court's award of summary judgment as premature and permitted the plaintiff to conduct additional limited discovery related to source code and claim construction. *Id.* at 914. As summarized by one scholar in the context of discovery in both patent infringement and trade secret litigation, "while source code production can be maddening, time consuming, and costly, it is by now relatively common in software cases." Sonia K. Katyal, *The Paradox of Source Code Secrecy*, 104 Cornell L. Rev. 1183, 1275 (2019). Thus, because "source code production is not an uncommon occurrence, litigators have ready-made tools at their disposal to address the merit of software-related disputes while ensuring that the source code remains protected and yet disclosed in a litigation dispute." *Id.* at 1275–76.

Plaintiff's document requests rely extensively on declarations of its expert witness. The trial court serves as the gatekeeper of expert testimony, "ensur[ing] that any and all scientific testimony or evidence admitted is not only relevant, but reliable." *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 589 (1993). In this regard, "the law grants the trial judge broad latitude to determine" the reliability of expert evidence. *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 153 (1999). The liberal standard of discovery, however, requires only relevancy and proportionality to the needs of the case; RCFC 26 does not require the Court to adjudicate any threshold issues of reliability at this early stage of the proceedings. *See* RCFC 26(b)(1). Other trial courts have reached similar conclusions after reviewing the general standards prescribed by both *Daubert* and *Kumho Tire* when evaluating expert testimony during discovery.[2]

V. Discussion

[2] For example, other trial courts have noted: "so long as requested discovery is relevant under discovery's broad standard, this court—supervising discovery as it does—is not to employ the discovery rules to prematurely decide evidentiary issues that are reserved for the [fact finder]." *U.S. ex rel. Guardiola v. Renown Health*, No. 12-295, 2015 WL 5123375, at *4 (D. Nev. Sept. 1, 2015). Thus, trial courts generally "decline[] to prematurely adjudicate evidentiary issues related to expert testimony during the discovery process." *Id. See also Apple iPod iTunes Antitrust Litig.*, No. 05-0037, 2014 WL 4809288, at *6 (N.D. Cal. Sept. 26, 2014) ("Unless beyond the realms of reason and reliability, [issues that speak to an expert's methodology] are fully within the province of experts to debate and [the fact finder] to resolve."); *Urrutia v. Ekdahl*, No. 03-1990, 2005 WL 5976564, at *4 (D. Ariz. July 15, 2005) ("Questions concerning the accuracy and reliability of a witness' factual basis, data and methods goes to the weight and credibility of the witness' testimony and are questions of fact properly reserved for the [fact finder].").

A. Production of Source Code for Additional F-35 HMDS Modules

Plaintiff seeks the production of the "F-35 HMDS source code for all software components that have access to signals originating or derived from helmet-mounted inertial sensors." Mot. to Compel at 7. This includes any signals leaving the HTS for which Elbit has already produced the source code. *Id.* Thus, the source code sought is "the code for all software components running on the dedicated computer that controls the F-35 HMDS, called the 'DMC/H.'" *Id.*

Relying on the testimony of its expert, plaintiff argues the source code of the HTS module "points to the undisclosed part of the source code as the location where infringement likely occurs." *Id.* at 9 (citing Welch Decl. ¶¶ 33–52). Elbit, however, asserts it "has already produced all of the source code used in the F-35 to track the position and orientation of the helmet relative to the aircraft." Resp. to Mot. to Compel at 13. The HTS, according to Elbit, is a "discrete piece of software" which performs all "tracking of the position and orientation of the helmet." *Id.* As plaintiff did not provide any explanation of "how or why it believes any software other than the HTS is relevant to this case," Elbit refuses plaintiff's repeated requests to produce the source code for additional modules of the HMDS.[3] *Id.* at 15.

A showing of relevancy to plaintiff's claims and proportionality to the needs of the case are required to satisfy a request to produce source code. RCFC 26(b)(1). For example, in *Baron Services, Inc. v. Media Weather Innovations LLC*, the plaintiff sought delay in the district court's ruling on defendant's "summary judgment motion until [plaintiff] had . . . the opportunity to examine [defendant's] source code and to depose [defendant employees]." 717 F.3d at 912. The plaintiff in *Baron Services* represented to the district court that "[defendant's] source code could show that the accused devices met several of the limitations of the asserted claims." *Id.* at 913. The Federal Circuit vacated the trial court's award of summary judgment and permitted plaintiff to conduct additional "limited discovery" related to claim construction. *Id.* at 914. In a footnote, the Federal Circuit clarified where the patent holder "seeks discovery of the source code as relevant to its *claims*[,] [the patent holder's] burden" is as set forth in Rule 26(b)(1).[4] *Id.* at 913 n.9.

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[3] Elbit also argues plaintiff's motion to compel was not timely filed. *See* Resp. to Mot. to Compel at 10. RCFC 37 does not prescribe a defined period for filing a motion to compel. "[T]here is no specified time for filing a motion to compel, [and] courts generally look[] to the deadline for completion of discovery in considering whether a motion to compel has been timely filed." *Hitkansut LLC v. United States*, 119 Fed. Cl. 40, 49 (2014) (quoting *Days Inn Worldwide, Inc. v. Sonia Invs.*, 237 F.R.D. 395, 397 (N.D. Tex. 2006)) (internal citation and quotation marks omitted). This case was never placed on a formal discovery schedule. Instead, based upon the unique nature of the case as outlined *supra*, this Court permitted the parties to engage in limited, focused discovery regarding the issue of noninfringement. This Court did not set a deadline for the completion of discovery, but instead periodically held status conferences throughout the limited discovery to stay apprised of the parties' progress. *See, e.g.*, Scheduling Order, ECF No. 98. Given these circumstances, the Court finds it improper to consider the timeliness of plaintiff's motion to compel.

[4] A dissenting opinion attempted to attribute an elevated "good cause" standard to the accused infringer's production of source code, however, the Federal Circuit refused to recognize such a heightened bar during discovery. *Baron Services* addresses the scope of Rule 26(b)(1) as it appeared in 2013. In 2015, the language of Rule 26(b)(1) was amended, removing the following language: "reasonably calculated to lead to the discovery of admissible

Plaintiff thus need only show that the source code for related modules, other than the HTS, is relevant to the asserted claims of the '159 patent as they allege infringement against the F-35 HMDS. *See Oppenheimer*, 437 U.S. at 351; *see also Baron Servs.*, 717 F.3d at 913 n.9. The relevancy of the related modules, such as those receiving signals from the HTS, was the subject of plaintiff's expert report prepared by Dr. Welch. According to Dr. Welch, there are two critical questions which must be answered to determine whether the F-35 HMDS practices the "new method:" (1) "Does the F-35 HMDS determine a relative signal from signals measured by inertial sensors on the aircraft and on the helmet?" and (2) "Does the F-35 HMDS determine relative orientation or position by integrating such a relative signal?" Mot. to Compel at 9 (citing Welch Decl. ¶ 33). According to plaintiff's expert, the answer to the first question is yes: the source code for the HTS shows the calculation of a "relative angular rate signal from inertial sensors on the aircraft and on the helmet." *Id.* (citing Welch Decl. ¶ 36) (emphasis omitted). The second question, however, cannot be definitively answered based upon the information currently made available to plaintiff. Based on Dr. Welch's analysis, the relative angular rate signal is sent to various other modules in the F-35 HMDS. *Id.* Plaintiff, however, suggests "the F-35 HMDS can predict orientation at instants in time not otherwise provided, which can be accomplished by integrating the relative angular rate signal." *Id.* (citing Welch Decl. ¶¶ 38–42) (emphasis omitted).

The documents plaintiff seeks, as provided in the Supplemental Requests, are hereinafter analyzed according to the following groupings based upon the specific subject matter of the requests: (1) Supplemental Requests 1–5; (2) Supplemental Request 6; (3) Supplemental Request 7; (4) Supplemental Requests 8–9; (5) Supplemental Requests 10–11; and (6) Supplemental Request 12.

1. Supplemental Requests 1–5

Supplemental Document Requests 1–5 each identify a specific module which, according to plaintiff's expert Dr. Welch, "likely uses inertial signals." Suppl. Req. at 3. Plaintiff's expert further provides particularized reasons for why each of these modules is likely to use the inertial signals. Supplemental Request 1 seeks the production of the "current or most recent version of the source code for the HMDS Support Package ('HSP') CSCI." *Id.* at 2. Plaintiff identifies individual components within the HSP module, as well as the following justification for production:

> The basis for Thales' understanding that this software likely uses inertial signals is set forth in the Welch Declaration at paragraphs 33–47 and the exhibits cited in the Declaration and above. The basis for Thales' understanding includes that [XXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

evidence." *See* 2015 Advisory Committee Note, Federal Rules of Civil Procedure (as amended Dec. 1, 2015). "The phrase [was] used by some, incorrectly, to define the scope of discovery." *Id.* Accordingly, the rule was amended to read as follows, without any substantive change in scope: "information within this scope of discovery need not be admissible in evidence to be discoverable." *Id.*

> XXXXXXXXXXXXX] This component is also documented to perform the function of [XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX] All software installed on the DMC/H may have access to relevant inertial signals. Even if this software does not itself use the inertial signals, it may control access to those signals (for example through the "HMDS Interface Package (HIP)") and therefore may be relevant to determining what other software is likely to use them.

Id. at 3 (internal citations omitted). Most of plaintiff's discussion regarding Supplemental Request 1 is equally applicable, and in fact reproduced, for Supplemental Requests 2–5. Unique to Supplemental Request 1, however, is the documented performance of [XXXXXXXXXXX]

Supplemental Request 2 seeks production of the "current or most recent version of the source code for the Video and Symbology Driver ('VSD') CSCI." *Id.* at 3. Plaintiff identifies specific components of the VSD, as well as indicating this module's documented performance of [XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX] *Id.* Plaintiff further notes the VSD's documented ability to [XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXX] *Id.* (internal quotation marks omitted).

Supplemental Request 3 seeks production of the "current or most recent version of the source code for the Operational Flight Program ('OFP') CSCI." Suppl. Req. at 3. Plaintiff identifies various capabilities and components of the OFP, further indicating this module "is documented to perform [XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXX] *Id.* at 4.

Supplemental Request 4 seeks production of the "current or most recent version of the source code for the Video and Graphics Accelerator Driver ('VGAD') CSCI." *Id.* Plaintiff provides various capabilities and components of the VGAD. *Id.* Plaintiff further states this module "perform[s] [XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX] in addition to [XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXX] *Id.* at 5 (internal quotation marks omitted).

Supplemental Request 5 seeks production of the "current or most recent version of the source code for the Board Support Package ('HDP BSP' and 'HTS BSP') CSCIs." *Id.* Plaintiff notes various capabilities of this module but does not supply any additional comments on the components or documented functions of the various BSPs. While the specific rationale varies from module to module, each of the modules identified in Supplemental Requests 1–5 may be evaluated together under the liberal discovery standard of Rule 26(b)(1).

a. Integration of the Relative Angular Rate Signal

According to the technical documents already provided, plaintiff argues it is more than "mere speculation" that the integration occurs in modules other than the HTS. Mot. to Compel at 9. The F-35 HMDS is capable of [XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXX] *Id.* at 10 (citing Welch Decl. ¶¶ 38–42). In order to know the orientation at the correct instant, the system "must [XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX] *Id.*

While Elbit does disclose the source code for the HTS, which is the software directly responsible for tracking the position and orientation of the helmet, Elbit does not provide any evidence that Dr. Welch's second critical question is not answered by other modules in the system. Instead, Elbit asserts the HTS does not perform the integration critical to the inquiry. *See, e.g.*, Resp. to Mot. to Compel at 14 ("[T]he HTS does not use the alleged 'new way.'"); *id.* ("[T]he HTS does not integrate a relative rate signal."); *id.* at 17–18 ("Elbit has already produced the source code used in the F-35 HMDS to track the position and orientation of the helmet").

To shield it from producing additional documents and materials, Elbit cites to a series of non-binding authority seemingly discussing a heightened burden for the production of source code. *See* Resp. to Mot. to Compel at 14 (citing *Ameranth, Inc. v. Pizza Hut, Inc.*, No. 11-1810, 2013 WL 636936, at *7 (S.D. Cal. Feb. 20, 2013) (limiting discovery of source code to that which is "sufficient to show the operation of those system aspects" relevant to infringement) (internal quotation marks omitted); *Synopsys, Inc. v. Nassda Corp.*, No. 01-2519, 2002 WL 32749138, at *1 (N.D. Cal. Sept. 16, 2002) (requiring a showing that source code is "both relevant and necessary to this action"). As previously discussed, there is no heightened burden on the discovery of source code in a patent infringement action. *See Oppenheimer*, 437 U.S. at 351; *see also Baron Servs.*, 717 F.3d at 913 n.9 (finding a patent holder need only satisfy the requirements of Rule 26(b)(1) for access to source code).

The Court recognizes the F-35 HMDS contains numerous modules, and some of those modules may be wholly unrelated to calculation of the position and orientation of the helmet. This is why the Court ordered plaintiff to narrowly target the Supplemental Requests, specifically identifying "any modules alleged to use data from the inertial sensors, the basis for such allegations, and the nature of the information being requested." Order, ECF No. 125. Plaintiff appears to have done just that. In the Supplemental Requests, plaintiff identified five specific modules [XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX] *See* Suppl. Req. These five modules are: the HMDS Support Package ("HSP"); the Video and Symbology Driver ("VSD"); the Operational Flight Program ("OFP"); the "Video and Graphics Accelerator Driver ("VGAD"); and the Board Support Package ("HDP BSP" and "HTS BSP"). *See id.* at 2–5. Plaintiff further identified specific signals leaving the HTS, as well as individual operations performed by the various modules. *Id.* The specifically identified signals include [X XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX] *Id.* at 5. According to plaintiff and plaintiff's expert, it is undisputed that at least the modules identified in Supplemental Requests 1–4, that is the HSP, VSD, OFP, and VGAD, perform computations involving [XXXXXXXXX XXX] *See* Tr. at 106:12–15, ECF No. 142 ("With respect to the VSD, the VGAD, the OFP, and the HSP, we understand that these modules [XXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX] Production of the

source code for these specific modules would confirm whether these computations involve the integration of a relative angular rate signal.

Despite the specificity of these requests, Elbit maintains its position: the source code for the HTS has already been produced, and the HTS "is the actual software component in the accused F-35 HMDS that is used [to] calculate the orientation and position of a pilot's helmet relative to the airplane." Resp. to Suppl. Req. at 9. Elbit did, however, provide a more targeted response as to why it views these specific signals "not relevant to any of [plaintiff's] infringement contentions:"

> [XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
> XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
> XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
> XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
> XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX]

Resp. to Suppl. Req. at 10. Based on this statement, and when pressed on the use of specific signals on particular modules, Elbit offers nothing more than conclusory statements regarding intended use of the signals. While the Court appreciates the sensitive nature of the source code at issue, this case is subject to two protective orders,[5] in addition to the government's inspection and certification of the security systems of both plaintiff's and Elbit's outside counsel. *See* Notice of Inspection and Certification, ECF No. 81. [XXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXX] producing the source code for the modules receiving this signal would confirm Elbit's position. Assuming Elbit's position is correct, the source code would show no integration of the relative angular rate signal, and any fears regarding disclosure of this limited information will be adequately protected pursuant to careful measures already implemented in this case.

Elbit provides only a conclusory statement regarding the function of the modules without providing the source code. Similarly, Elbit provided a specific response regarding [XXXXXXX XXX]:

> [XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXX] The '159 patent claims methods and systems for computing relative orientation of a moving object relative to a moving reference frame. But the '159 patent does not claim any method or system describing the use of that orientation, once determined. The use of the computed orientation or position of a pilot's helmet relative to the F-35 is therefore not relevant to any of [plaintiff's] infringement contentions.

[5] See Order, ECF No. 51, granting the parties' Stipulated Protective Order for Information Produced Subject to Controls Administered by the Israeli Ministry of Defense and/or the U.S. State Department, Directorate of Defense Trade Controls ("IMOD/DDTC"), and Order, ECF No. 79, granting the parties' Stipulated Protective Order covering all protected or confidential information not covered by the IMOD/DDTC protective order.

Resp. to Suppl. Req. at 10. The attempt to focus on the scope of the claims of the '159 patent as being restricted to computation of position or orientation, which Elbit distinguishes from the "use" of the position or orientation, ignores [XXXXXXXXXXX]. Specifically, Elbit does not address [XXXXXXXXXXXXXXXXXXXXXXXXXXXX] Yet plaintiff specifically identifies the HSP as receiving [XXXXXXXXXXXXXXXXXXXX] Suppl. Req. at 3. The HSP is further identified as [XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXX] *Id.*

b. Limited Claim Construction of the '159 Patent

Elbit does specifically address one particular function, [XXXXXXXXXXXXXXXXX XXXXXXXXXXX] According to plaintiff's expert, [XXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXX] Welch Decl. ¶ 34. Plaintiff therefore identifies [XXXXXXXXX] as a function [XXXXXXXXXXXXXXXXX] with the potential to infringe the '159 patent:

> Elbit has made the statement in their interrogatory responses that [XXXXXXXXX XXX] which is what we call the relative angular rate signal, is not integrated. That's what they say. But we know there's a calculation being performed there. And that makes sense, because these modules are based on the schematic documents, the high-level documents we've gotten, in the pipeline, from the inertial sensors through to the display on the helmets. And when we're trying to trace these signals, that's generally the pipeline that we're trying to follow.

Tr. at 106:19–107:5, ECF No. 142. In fact, Dr. Welch disclosed he was "not aware of any reason for [XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX] Welch Decl. ¶ 38.[6]

Elbit first generally notes any outputs of the function [XXXXXXXXXXXXXXXXXX XXXXXXXXXX] are not relevant to [plaintiff's] infringement contentions." Resp. to Suppl. Req. at 10–11. More particularly, Elbit provides the following explanation regarding [XXXXX XXXXXXXXXXXXXXXXX]:

> [XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX] The asserted claims are specifically confined to the use of raw signal data from inertial sensors, and [plaintiff] is legally precluded from arguing otherwise, based on the doctrines of judicial estoppel and prosecution history disclaimer. [XXXXXXXX

[6] During oral argument, Elbit's counsel responded to Dr. Welch's observation, identifying [XXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX] Tr. at 47:7, ECF No. 142. However, when the Court asked Elbit if they had "provided all documents related to [XXXXXXXXX] does or touches or is used for," counsel for Elbit could not provide a definitive answer: "Honestly, I don't know that. We have certainly described these functions and provided documents for it. . . ." *Id.* at 49:9–14.

> XXXX] does not contain a "relative angular rate signal." Therefore, no software could use [XXXXXXXXXXXX] to practice any of the asserted claims of the '159 patent.

Id.

Elbit's position invokes the use of a particular claim construction for the following claim limitation in claim 3 of the '159 patent: "integrating a relative angular rate signal *determined* from the angular rate signals measured by the first and second inertial sensors." '159 Patent at col. 11:66–12:2 (emphasis added). Elbit reads this claim limitation as computing the relative angular rate signal "directly from raw signal data" based upon statements made by plaintiff's expert, Dr. Welch, during the IPR. *See* Resp. to Mot. to Compel at 28–30. Thus, according to Elbit, neither [XXXXXXXXXXXXXXXXXXXXXXXXXXXX] contain a relative angular rate signal. *See* Resp. to Suppl. Req. at 10–11 ([XXXXXXXXXXXXXXXXXXXX] is not used by any Elbit software on the F-35 to compute a relative position or orientation and is therefore not relevant to any of [plaintiff's] infringement contentions."); *see also id.* ("[N]o software could use [XXXXXXXXXXXXX] practice any of the asserted claims of the '159 patent.").

During the IPR, Dr. Welch differentiated the "old method" (calculating orientation relative to the earth) from the "new method" (calculating orientation relative to a moving reference frame) based upon the use of "raw signals directly from sensors . . . mounted on the object and the moving reference frame to compute relative orientation." Resp. to Mot. to Compel at 29–30 (quoting Decl. of Welch from the IPR, Resp. to Mot. to Compel, Ex. B at ¶¶ 67–68). A demarcation was therefore allegedly drawn between the use of "processed" signals and "raw signals." Now, however, Dr. Welch asserts [XXXXXXXXXXXXXXXXXX] is a relative angular rate signal. *Id.* at 30. According to Elbit, these two positions are mutually exclusive: if the relative angular rate signal is [XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX] then such a signal is a "processed" signal explicitly excluded from the scope of the claims of the '159 patent. *Id.* at 31 (internal quotation marks omitted) (quoting Welch Decl. ¶ 34). Elbit argues "[t]he asserted claims are specifically confined to the use of raw signal data from inertial sensors, and [plaintiff] is legally precluded from arguing otherwise, based on the doctrines of judicial estoppel and prosecution history disclaimer." Resp. to Suppl. Req. at 10.[7]

[7] Elbit references the doctrines of both prosecution history disclaimer and judicial estoppel as a basis for its proposed claim construction in its response to the Supplemental Requests. Though not directly addressed in its response to plaintiff's motion to compel, Elbit also discussed both doctrines during oral argument, seemingly using the terms interchangeably. According to Elbit, application of the respective doctrines stem from the same arguments presented by plaintiff, but differ only in the venue in which the arguments were presented:

> COUNSEL FOR ELBIT: [Y]ou can view it either as an issue of claim construction, or also a question of judicial estoppel.
> THE COURT: [B]ecause of what was argued and stated at the PTO?
> COUNSEL FOR ELBIT: In the PTO and also at the Federal Circuit. And the Federal Circuit adopted their position. . . .

"Prosecution disclaimer 'preclud[es] patentees from recapturing through claim interpretation specific meanings disclaimed during prosecution.'" *Aylus Networks, Inc. v. Apple Inc.*, 856 F.3d 1353, 1359 (Fed. Cir. 2017) (quoting *Omega Eng'g., Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed Cir. 2003)). Although Elbit does cite Federal Circuit case law discussing prosecution history disclaimer, plaintiff rightly points out that none of Elbit's cited cases are directed to statements made during an IPR proceeding. While the parties seem to have avoided this line of cases entirely, the Federal Circuit has directly addressed the use of statements made during IPR proceedings when construing the claims during subsequent infringement litigation. "Because an IPR proceeding involves reexamination of an earlier administrative grant of a patent, it follows that statements made by a patent owner during an IPR proceeding can be considered during claim construction and relied upon to support a finding of prosecution disclaimer. . . . [T]o invoke the doctrine of prosecution disclaimer, any such statements must 'be both clear and unmistakable.'" *Aylus Networks*, 856 F.3d at 1361 (quoting *Omega Eng'g.*, 334 F.3d at 1326).

Plaintiff argues against construing this particular claim term in isolation at this stage of proceedings, while further rejecting Elbit's attempts to invoke prosecution disclaimer based upon statements and positions allegedly taken during the IPR. *See* Reply in Supp. of Mot. to Compel at 18–20. According to plaintiff, "Dr. Welch's prior statements are consistent with the claim language and the context in which they occurred." *Id.* at 18. In particular, both "Dr. Welch and [plaintiff] refer to the use of 'raw' signals when they are referring to the advantages of the embodiment described in the patent, which are available to any system that computes motion using a relative signal." *Id.* (emphasis omitted). Plaintiff further notes the "PTAB did not conduct any claim construction during the [IPR]" with regards to the claim term now invoked by Elbit, emphasizing "none of the arguments or rulings in the [IPR] depended upon or even addressed how a relative angular rate signal is to be determined." *Id.* (emphasis omitted).

This case has wandered into a unique procedural posture. Claim construction has not begun. In fact, the parties have yet to even exchange a listing of proposed claim terms. Although Elbit now asks the Court to take up claim construction of this particular claim limitation in isolation, it was Elbit who initiated the unique trajectory of this case resulting in the limited infringement-related discovery before conventional claim construction proceedings. When discussing the procedural posture of this case during a status conference in September 2019, Elbit's counsel stated:

> [W]e were very clear that, given the handful of claims that were remaining that were very narrow, that there was no viable infringement case, and we took the unusual step at that time to provide a detailed memorandum explaining, in great detail, with recitation to documents as well, why there is no infringement case here, and we also agreed to make available technical documentation, including source code.

Tr. at 38:12–19, ECF No. 142. Based on Elbit's characterization of these arguments, the Court finds its discussion of the doctrine of prosecution history estoppel sufficient to cover Elbit's similarly raised, if not identical, arguments raising the doctrine of judicial estoppel.

Tr. at 12:4–11, ECF No. 128; *see also* Reply in Supp. of Mot. to Compel at 1 ("Elbit avoided a case management order that would have set deadlines for claim construction and the completion of all discovery by making a bold representation: Elbit claimed that it would produce source code files and documents that would prove there is no infringement so decisively that [plaintiff] would have no good faith basis to pursue this case."). Now, however, in response to plaintiff's request to compel the production of additional source code and documents, Elbit attempts to invoke the doctrine of prosecution disclaimer, outside the traditional vehicle of claim construction, to limit the scope of its production.

The Court does not make any findings as to the applicability of Elbit's prosecution history disclaimer arguments. Rather, the Court notes such arguments are better reserved for claim construction. The Court recognizes it may "engage in claim construction during various phases of litigation, not just in a *Markman* order." *Conoco, Inc. v. Energy & Envtl. Int'l., L.C.*, 460 F.3d 1349, 1359 (Fed. Cir. 2006). Here, however, the parties have not even exchanged proposed terms for construction. Plaintiff does not have the opportunity to present its proposed construction, but rather only respond to Elbit's proposed construction. Further, Elbit's arguments regarding prosecution history disclaimer are only one element of a claim construction analysis. As the Federal Circuit noted, "statements made by a patent owner during an IPR proceeding *can be considered* during claim construction and relied upon to support a finding of prosecution disclaimer." *Aylus Networks,* 856 F.3d at 1361 (emphasis added). Trial courts have discretion in directing the scope and conduct of discovery. *Florsheim Shoe Co.*, 744 F.2d at 797. It would be premature for the Court to construe this particular claim limitation in isolation according to Elbit's proposed construction based upon the incomplete record currently available.

Plaintiff further identifies documented functions and activities of the various modules implicating [XXXXXXXXXXXX]. The Video and Symbology Driver [XXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXX] Suppl. Req. at 3. The Operational Flight Program [XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXX] *Id.* at 4 (internal quotation marks omitted). The Video and Graphics Accelerator Driver [XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX] *Id.* at 5. Elbit does not provide any response to plaintiff's specific identification of these module's functions.

The Court finds it premature to construe a particular claim limitation in isolation at this stage of the proceedings, and in particular on the current record available. *See, e.g.*, *Baron Servs.*, 717 F.3d at 914 (vacating the district court's award of summary judgment without conducting any claim construction and remanding for further proceedings to permit plaintiff the opportunity to pursue "claim construction with appropriately limited discovery"); *In re Bill of Lading Transmission & Processing Sys. Patent Litig.*, 681 F.3d 1323, 1343 n.13 (Fed. Cir. 2012) (finding the district court's reliance on a "narrow construction of the patent's claims" at the pleading stage prior to conducting any discovery and "with no claim construction process undertaken . . . was inappropriate"); Menell et al., *supra*, at 5-5 (noting a majority of district

courts choose to hold a *Markman* hearing midway through or near the end of discovery as "[t]his timing affords the parties sufficient discovery in advance of the claim-construction hearing to gain an understanding of the liability issues and accurately identify the terms needing construction"). Absent even limited claim construction, Elbit cannot maintain why discovery of the source code for the identified modules is not relevant to plaintiff's claims for infringement, as liberally construed. Plaintiff is permitted to seek discovery of those modules specifically identified as receiving signals from the HTS or otherwise performing functions related thereto. Plaintiff's motion to compel the production of source code for the modules identified in Supplemental Document Requests 1–5 is granted.

2. Supplemental Request 6

In Supplemental Request 6, plaintiff seeks the source code for the following modules: Boot-Strap; LDR1; LDR2 LOSIC; LDR2 Display; LDR2 GP; HTS Debug; Marshalling0.1; and Marshalling. Suppl. Req. at 5. Plaintiff further seeks the production of "all other software that is installed on the DMC/H." *Id.* Plaintiff states the following regarding these modules:

> The basis for Thales' understanding that this software likely uses inertial signals is set forth in the Welch Declaration at paragraphs 33–47 and the exhibits cited in the Declaration and above. The basis for Thales' understanding includes that [XXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXX] and that these components are installed on the DMC/H and therefore may have access to relevant inertial signals. Even if this software does not itself use the inertial signals, it may control access to those signals and therefore may be relevant to determining what other software is likely to use them.

Id. at 6.

Elbit characterizes these modules as nothing but "low-level software" used for performing basic, unrelated functions. *See* Tr. at 117:9–11, ECF No. 142. Additionally, Elbit explicitly states the "Boot-Strap," "LDR1," "LDR2 LOSIC," "LDR2 Display," and "LDR2 GP" modules [XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXX] Resp. to Suppl. Req. at 41. Elbit bases this conclusion on consultation with the "technical manager for the F-35 program at the relevant time, who helped design and develop the helmet tracking software used in the HMDS." *Id.* at 42. Elbit makes no further representations regarding the "HTS Debug" or either of the "Marshalling" modules.

Unlike the modules discussed previously in Supplemental Requests 1–5, and in particular requests 1–4 for which plaintiff identifies specific computations being performed, plaintiff does not identify specific computations involving [XXXXXXXXXXX] performed by the modules identified in Supplemental Request 6. *See* Tr. at 106:12–22, ECF No. 142 (discussing the computations performed only by those modules identified in Supplemental Requests 1–4). It is not as if plaintiff is seeking the source code for wholly irrelevant modules on the plane, such as the engine thrusters, landing gear, weapons systems, etc. *See* Tr. at 123:11–17 ("We have done our best to identify the specific modules. . . . [W]e're not talking about an enormous amount of

data, we're not talking about, you know, things that are unrelated to the HMDS. We're talking about, you know, a handful of modules that are running on the actual machine that makes this work.").

Although plaintiff notes the specific modules grouped together in Supplemental Request 6 are "less relevant" than those identified in Supplemental Requests 1–5 (such as those identified as performing specific computations in requests 1–4), this does not render the secondary group of modules identified in Supplemental Request 6 entirely irrelevant to plaintiff's infringement contentions. Tr. at 109:24, ECF No. 142. Elbit has not rebutted plaintiff's showing that these modules satisfy the liberal relevancy standards of discovery. To the extent plaintiff identifies specific modules in Supplemental Request 6, such specifically identified modules are discoverable. The final provision of Supplemental Request 6, however, is overly broad and not adequately supported by plaintiff's arguments regarding "all other software that is installed on the DMC/H." Suppl. Req. at 5. Any additional software modules running on the DMC/H not specifically identified in Supplemental Request 6 are not discoverable, unless otherwise indicated in relation to one of the other Supplemental Requests.

Similar to the modules identified in Supplemental Requests 1–5, Elbit cannot maintain why discovery of the source code for the specifically identified modules in Supplemental Request 6 are not relevant to plaintiff's claims for infringement pursuant to Rule 26(b)(1)'s liberally construed discovery standard. Accordingly, plaintiff's motion to compel the production of source code for the modules specifically identified in Supplemental Document Request 6 is granted in part. Elbit shall produce the source code for the following modules: Boot-Strap; LDR1; LDR2 LOSIC; LDR2 Display; LDR2 GP; HTS Debug; Marshalling0.1; and Marshalling. To the extent plaintiff's motion to compel seeks the production of source code for all other software installed on the DMC/H, plaintiff's motion is denied.

3. Supplemental Request 7

Supplemental Request 7 is styled as a "catch-all" provision, addressing any versions, whether developed by Elbit or another third-party, with access to the implicated signals not covered by Supplemental Requests 1–6. Specifically, plaintiff seeks "the current or most recent version of all source code for software relating to the HDMS [sic] with access to or controlling access to [XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX], or any orientation rates or accelerations that originate or are calculated using data from inertial sensors mounted in a helmet of any HMDS." Suppl. Req. at 6.

According to plaintiff, Supplemental Request 7 takes an alternative approach from the format of Supplemental Requests 1–6. In Supplemental Requests 1–6, plaintiff identified the specific modules on the DMC/H currently known to [XXXXXXXXXXXXXXXXXXXXXX. XXXXXXXXXXXXXXXX]. In Supplemental Request 7, however, plaintiff attempts to trace the signals themselves, in the event they are received by additional modules not yet identified:

> What we're trying to do with the source code is we are trying to trace the flow of information from the inertial sensors on the helmet to an end point. And that end

> point is either the helmet display or it is some other end point where our expert can conclude there is no infringement in the system.

Tr. at 14:19–25, ECF No. 142. Elbit's response to Supplemental Request 7 mirrored that for Supplemental Requests 1–6: conclusory statements that [XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX] a relative angular rate signal is not integrated anywhere in the HMDS; and reliance on Elbit's own self-serving construction of the claims. *See, e.g.*, Tr. at 29:9–11, ECF No. 142 ("[W]e made clear that [XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX]; *id.* at 32:23–25 ("[T]here's no other software in the helmet system that integrates it or that calculates a position or orientation."); *id.* at 32:3–10 ("[W]e believe there is no relative angular rate signal . . . based on explicit representations that [plaintiff] has made both to the Patent Office and to the Federal Circuit about the meaning of those claims.").

Elbit further fails to maintain why discovery of the source code for the remaining modules with access to, or controlling access to, the relevant signals, as liberally construed pursuant to Rule 26(b)(1), are not relevant to plaintiff's claims for infringement. Accordingly, plaintiff's motion to compel the production of source code for any remaining modules having access to, or controlling access to, the relevant signals as set forth in Supplemental Document Request 7 is granted.

4. Supplemental Requests 8–9

In Supplemental Request 8, plaintiff seeks all versions of source code "released from Elbit's source code repository for potential use for tracking motion on a moving platform from the earlier of January 1, 2011 or the first date on which any helmet developed for the HMDS contained an inertial sensor." Suppl. Req. at 6. Plaintiff emphasizes the need to review previous versions of source code to understand "how the system evolved over time." Tr. at 66:24, ECF No. 142. Elbit, again, refers to its production of all 13 versions of source code for the HTS which entered the United States for use by the government. Tr. at 82:16–20, ECF No. 142 ("The versions that were installed in aircrafts, the versions that actually went to the United States Government, have been produced. You know, we've produced 13 versions, all of those have already been produced.").

To the extent Elbit contends the production of additional versions of source code would be unduly burdensome based upon the volume of production, plaintiff proposes several methods of reducing any such burden on Elbit. *See* Resp. to Suppl. Req. at 59; *see also* Tr. at 97:22–98:2 ("[T]o ask a company to simply turn over every piece of source code, and when you read these in total, that's basically what they're asking for, is every piece of source code, without any showing that it's relevant, that is an extraordinary burden. . . ."). For example, during oral argument, plaintiff rightly clarified not *every* iteration of source code would be necessary, such as those showing minor or otherwise trivial modifications. *See* Tr. at 67:4–22, ECF No. 142 ("We're open to any reasonable way to limit that to something that makes sense. . . . [W]hen we talk about versions, we're talking about versions of the software that are like a milestone, not literally every revision that is made to any particular source code file."). Production could be limited to only significant revisions to the source code, such as those constituting the various "generation

versions" of the HMDS or other significant modifications. *See id.* In Supplemental Interrogatory 6, plaintiff posits whether any objections to production "based on undue burden could be avoided by producing a sample of the unproduced versions." Suppl. Req. at 8. Elbit does not show the inadequacy of such safeguards to limit any unduly burdensome production.

Accordingly, plaintiff's motion to compel as it relates to Supplemental Request 8 is granted in part. Elbit shall produce all previous versions of source code requested in Supplemental Requests 1–7 used for tracking motion on a moving platform, as defined in this opinion and order, pursuant to Supplemental Request 8. The parties shall meet and confer to determine the most efficient manner for producing the source code, followed by submission of a joint status report indicating the specific versions to be produced.

Supplemental Request 9 seeks "all technical documents relating to the design or operation of the 'HTS' CSCI or the software components for which source code is requested in Supplemental Document Requests 1–8." *Id.* at 6. According to plaintiff, "[a]n effective source code review requires access to documents relating to the operation of the software and the development of the code." Mot. to Compel at 12. Elbit initially argues plaintiff never before requested these documents and therefore the request is improper. Resp. to Mot. to Compel at 22. The Supplemental Requests were required by the Court, however, and were submitted after the parties' initial briefs to effectively modify the scope of plaintiff's initial requests. Suppl. Req. at 6. The timing of this request is accordingly not improper.

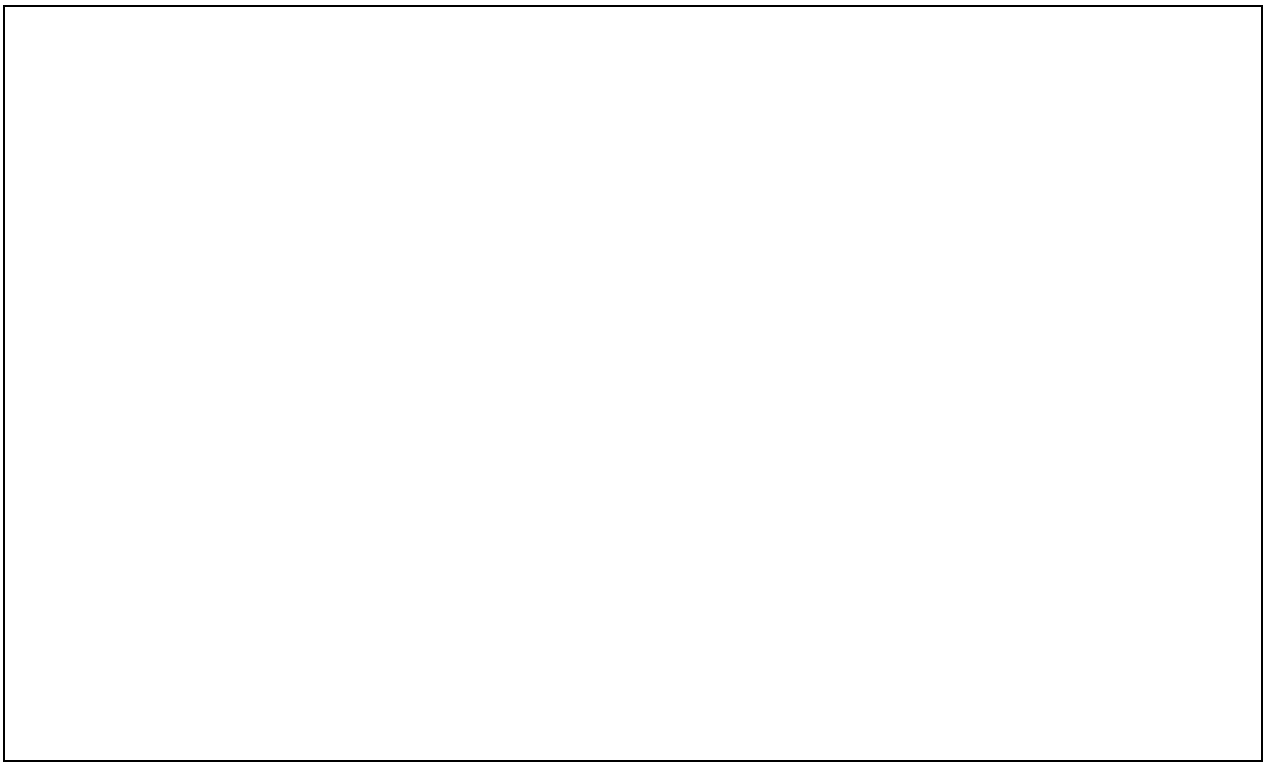
Elbit offers no further arguments against the production of related technical documents beyond once again disputing their relevancy, reiterating that "[t]he only relevant software is the Hybrid Tracker Software." Resp. to Mot. to Compel at 24. The Court agrees technical documents assist in understanding source code, particularly source code involving complex systems: plaintiff is "simply looking for the technical documents so that it's clear it's not just the source code, because as our expert has often reminded us, looking at source code in the absence of the context is much harder to do." Tr. at 70:19–23, ECF No. 142; *see also McKesson Info. Sols. LLC v. Epic Sys. Corp.*, 495 F. Supp. 2d 1329, 1334 (N.D. Ga. 2007) (finding "the source code alone is not sufficient to reasonably show the operation of the . . . software" in the absence of related technical designs and documents for complex software).

Plaintiff's motion to compel as it relates to Supplemental Request 9 is granted. Elbit shall produce all technical documents related to the HTS, if not already produced, in addition to all relevant technical documents related to the operation and development of the specific modules identified in each of Supplemental Request Nos. 1–8, as indicated in Supplemental Request 9.

B. Production of Documents Related to the Alleged Infringing Signal Processing Procedure ("the Smoking Gun" Document): Supplemental Requests 10–11

In response to this Court's order to produce "relevant technical documents that support [the Noninfringement Memo]," Elbit produced a series of technical documents "containing a signal processing procedure that infringes the asserted claims if implemented." Mot. to Compel

at 13. Below is a representative example of the allegedly infringing signal processing procedure, or "the smoking gun" document:



Mot. to Compel, Ex. 13 at 2. According to plaintiff's expert Dr. Welch, the two critical signal processing questions are answered affirmatively based upon "the smoking gun" document:

Signal Processing Questions	Answers
Does the F-35 HMDS determine a relative signal from signals measured by inertial sensors on the aircraft and on the helmet?	**Yes**, as shown by [XXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXX].
Does the F-35 HMDS determine relative orientation or position by integrating such a relative signal?	**Yes**, as shown by [XXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXX].

Id. at 13.

After reviewing "the smoking gun" document, plaintiff requested additional "documents that refer or relate to the information set forth in documents produced by Elbit showing the infringing procedure." *Id.* According to plaintiff:

> Documents related to an infringing procedure plainly are relevant to [plaintiff's] claims of infringement and Elbit's assertion of non-infringement. In fact, they are potentially among the most relevant documents. . . . Elbit already conceded that the infringing signal processing procedure and related information are relevant by producing these documents. . . . [T]here is no dispute that the signal processing procedure relates to Elbit's work on the F-35 HMDS.

Mot. to Compel at 13–14.

Elbit did not produce additional documents related to "the smoking gun" document. Instead, Elbit objected based upon the relevancy of the documents, claiming the "simulation algorithm was never used in the F-35." Resp. to Mot. to Compel at 24 (emphasis omitted). "Indeed, it was never used anywhere in the United States." *Id.* Elbit relies on the declaration of Dr. Efrat, "a senior algorithms engineer and the manager of the Algorithms Development Group" at Elbit, who stated "the allegedly infringing algorithm 'was never used or tested in the United States.'" *Id.* at 24–25 (quoting Mot. for Summ. J., Ex. B ¶ 20) (emphasis omitted). The only location where this algorithm was allegedly used was Israel. *Id.* at 25. The government similarly characterizes "the smoking gun" document as "a single diagram that Elbit asserts was part of an early computer simulation run only in Israel and never delivered to the United States." Gov't Brief II at 8. The government further reiterates Dr. Efrat's statements to "explain[] that Elbit abandoned the simulation algorithm by early 2012, well before the first [allegedly infringing] helmets were retrofitted with inertial sensors and delivered to the Government for testing." *Id.* (citation omitted).

Elbit and the government both refer to 28 U.S.C. § 1498 to dispute the relevancy of "the smoking gun" document. *See* Resp. to Mot. to Compel at 24; Gov't Brief II at 8–9. Section 1498 waives the government's sovereign immunity for patent infringement actions in limited circumstances:

> Whenever an invention described in and covered by a patent of the United States is used or manufactured by or for the United States without license of the owner thereof or lawful right to use or manufacture the same, the owner's remedy shall be by action against the United States in the United States Court of Federal Claims for the recovery of his reasonable and entire compensation for such use and manufacture.

28 U.S.C. § 1498(a). Section 1498, however, does "not apply to any claim arising in a foreign country." *Id.* § 1498(c).

Elbit argues it "does not provide the source code for the helmet tracking software to the United States government, and the United States government does not have any ability to access Elbit's source code database." Resp. to Mot. to Compel at 21. According to Elbit, the following have already been produced: "every version of the helmet tracking software that uses inertial data that has ever been installed in any F-35 aircraft;" "the current production version of the software;" "the source code for all previous production versions of the software;" and "all versions that were installed on any F-35 for testing purposes." *Id.* at 19 (emphasis omitted).

Thus, Elbit concludes any additional documents or materials regarding the algorithm are not relevant to the infringement claims in this case because "[t]he only issue before the Court is whether the inventions covered by the asserted claims of the '159 patent were used or manufactured by or for the United States." *Id.* at 26. "[A]ny claim that Elbit's internal simulations practiced the '159 patent would have 'aris[en] in a foreign country' and would therefore be beyond the jurisdiction of this Court." *Id.* at 25–26 (quoting 28 U.S.C. § 1498(c)).

The Federal Circuit interprets § 1498 as follows: "the use or importation within the United States [of] a product which is made by a process patented in the United States constitutes use of the invention without lawful right because the products embody the invention itself." *Zoltek Corp. v. United States*, 672 F.3d 1309, 1326 (Fed. Cir. 2012) (internal quotation marks omitted). Where a party "seek[s] production of documents and source code regarding potentially infringing systems" for infringement claims arising in foreign countries, however, this Court "does not have jurisdiction over these claims" and any such discovery is improper. *3rd Eye Surveillance, LLC v. United States*, No. 15-501, 2017 WL 2609233, at *2 (Fed. Cl. June 16, 2017).

The difficulty presented here is the final product of the F-35 aircraft helmet ultimately imported and used in the United States does not incorporate the algorithm from "the smoking gun" document. The algorithm was never implemented into the F-35 aircraft which is the sole subject of plaintiff's infringement allegations. *See* Resp. to Mot. to Compel at 24. Plaintiff does not provide any argument or citation to authority rebutting Elbit's assertions regarding the relevancy of the extraterritorial development of the algorithm. Rather, plaintiff summarily infers that "[i]t is axiomatic that all documents relating to an infringing signal processing procedure developed and implemented in any manner in connection with the F-35 HMDS are relevant and must be produced." Reply in Supp. of Mot. to Compel at 16. During oral argument, plaintiff described the development of the algorithm in relation to the final product F-35 helmet as follows:

> [I]t was produced as part of a production relating to the F-35. It is conceded that that is not like a separate program. It's not like there were two programs and this is the other one. There was one program, this is a part of the development of that program. If this is a roadmap to infringement, we're allowed to see that document.

Tr. at 137:17–23, ECF No. 142.

Neither § 1498 nor the case law supports this premise. Without entering the United States, or being implemented into the products used by the United States and therefore subject to the government's limited waiver of sovereign immunity, this Court cannot maintain jurisdiction over any claims or discovery resulting therefrom. *See Zoltek*, 672 F.3d at 1326 ("However, in this case, § 1498(c) does not exempt the United States from liability because the infringing acts—use or importation of the products resulting from the process—occurred in the United States. Importation occurs when the product crosses the United States' border, and use occurs within the United States."); *see also 3rd Eye Surveillance*, 2017 WL 2609233, at *2 ("Infringement claims based at U.S. embassies are outside the jurisdiction of this court, however, because they 'arise in a foreign country' within the meaning of 28 U.S.C. § 1498(c)."). The

algorithm contained in "the smoking gun" document relates to claims arising only in a foreign country. Absent jurisdiction over the underlying claims, the discovery of information related to systems developed and maintained entirely in a foreign country is improper. *See id.* ("Therefore, as the court does not have jurisdiction over these claims, plaintiffs' discovery of information related to systems located at U.S. embassies is improper."). Accordingly, plaintiff's attempts to seek discovery regarding extraterritorial documents and materials concerning "the smoking gun" document are improper. Plaintiff's motion to compel the production of documents and materials in Supplemental Requests 10 and 11 is denied.

C. Redaction of Documents Based Upon Relevancy of Information: Supplemental Request 12

Lastly, plaintiff seeks unredacted versions of documents Elbit previously produced in redacted form. Mot. to Compel at 14. Rather than redacting the documents based upon a claim of privilege, Elbit redacted various documents based upon the relevancy of the disclosed information, a tactic which plaintiff claims is improper. *Id.* Elbit asserts the information redacted from the previously produced documents "relate[s] to a few other products that are not used in the F-35 Joint Strike Fighter and are therefore not relevant to this case." Resp. to Mot. to Compel at 26. The parties cite to a series of competing district court cases supporting their respective propositions. *See* Mot. to Compel at 15; Resp. to Mot. to Compel at 27.

Plaintiff does not explain why the redacted information should be produced. In fact, plaintiff does not rebut Elbit's assertions that the redacted information relates to products not accused of infringing the '159 patent. Plaintiff selectively cites district court cases challenging the unilateral redaction of documents by the producing party. *See* Mot. to Compel at 14–15 (citing *Toyo Tire & Rubber Co. v. CIA Wheel Grp.*, No. 15-246, 2016 WL 6246384, at *2 (C.D. Cal. Feb. 23 2016)) (finding defendant "may not redact otherwise responsive documents because those documents contain irrelevant material"); *Melchior v. Hilite Int'l, Inc.*, No. 13-50177, 2013 WL 2238754, at *3 (E.D. Mich. May 21, 2013) (finding a nonparty "cannot unilaterally redact portions of documents based on relevancy grounds"). While the Court notes these district court cases found unilateral redaction of documents based on relevancy improper, neither of these cases presents an analogous factual situation to the present case. Here, plaintiff alleges infringement against the government based on its use of a signal-processing system implicated in one specific product: the F-35 fighter helmet. Plaintiff's complaint does not allege infringement by the government against any other products, software, or systems. Yet plaintiff seeks the production of documents containing information unrelated to the accused product or the government's use thereof.

In *Gilead Sciences, Inc. v. Merck & Co., Inc.*, Magistrate Judge Paul Grewal grappled with a similar factual scenario. No. 13-04057, 2016 WL 146574 (Jan. 13, 2016), *aff'd on other grounds*, 888 F.3d 1231 (Fed. Cir. 2018), *and cert. denied*, 139 S. Ct. 797 (2019). In *Gilead*, the plaintiff brought a declaratory judgment action against the patent holder seeking to invalidate two of the defendants' patents. *See Gilead Scis., Inc. v. Merck & Co., Inc.*, 888 F.3d 1231, 1233 (Fed. Cir. 2018). The patent holder "counter-claimed for infringement." *Id.* The technology at issue involved various classes of compounds "identified by structural formulas, and the administration of therapeutically effective amounts of such compounds." *Id.* Among the

plaintiff's arguments was that "it was the one to conceive and reduce to practice the inventions" prior to the defendant. *Gilead*, 2016 WL 146574, at *1. A photograph surfaced in a related proceeding showing tube labels listing the molecular weight of the contents of the respective tubes were the same as the accused compound. *Id.* Defendant sought "further production of further information about the tubes and their contents, including the tubes themselves." *Id.* Defendant already possessed, however, "information from [the plaintiff] that confirms that the tubes in question held" different compounds with the same molecular weight. *Id.* In discussing the proportionality of defendant's demands pursuant to Rule 26(b)(1), Magistrate Judge Grewal found:

> [The defendant's] demands are exactly the type of disproportionate demands that Rule 26(b)(1) proscribes. Sure, it's possible that [the plaintiff's] evidence . . . is false and even concocted. But [the defendant] offers no real evidence that this is the case, and as the court recently explained in denying a motion to compel by [the plaintiff], "[w]ithout more specific information triggering some reason for doubt, the Court must take the producing party . . . at its word." And so that leaves [the plaintiff] in the position of having to produce discovery on all sorts of compounds that bear no indication of any nexus to the disputes in this case. This is untenable. It would be like requiring GM to produce discovery on Buicks and Chevys in a patent case about Cadillacs simply because all three happen to be cars. In the absence of any reason to doubt the proof [the plaintiff] has tendered about the identity of the disputed compounds, and given the cost and potential delay introduced by the requested production, [the defendant's] request is precisely the kind of disproportionate discovery that Rule 26—old or new—was intended to preclude.

Id. at 2 (footnotes omitted).[8]

Here, Elbit produced documents deemed relevant to specific production requests with "minimal redactions to protect against disclosure of irrelevant information related to unaccused systems." Resp. to Mot. to Compel at 27–28. Plaintiff has failed to show how or why any unaccused systems are relevant to its infringement claims against the F-35 fighter helmet. In fact, plaintiff does not even argue that the redacted information is potentially responsive to the requests for production. Rather, plaintiff only argues Elbit may not make unilateral redactions based on relevancy and notes the documents are already designated as "Highly Protected –

[8] Other district courts have reached similar conclusions unique to patent infringement cases. *See, e.g.*, *BlackBerry Ltd. v. Facebook, Inc.*, No. 18-1844, 2019 WL 4544425, at *6 (C.D. Cal. Aug. 19, 2019) (finding request for production of all electronically stored information relating to a particular search term not relevant to the needs of the case under Rule 26(b) because "the adjudication of the infringement claims in this action will turn on the specifics of the Patents-in-Suit and the implementing source code for those accused patents"); *Nazomi Commc'ns, Inc. v. Samsung Telecomms., Inc.*, No. 10-05545, 2012 WL 1980807, at *3 (N.D. Cal. June 1, 2012) (declining to extend the production of source code beyond "the portion that is covered by its infringement claims"); *Funai Elec. Co. v. Orion Elec. Co.*, Nos. 02-2605, 01-3501, 2002 WL 1808419, at *7 (S.D.N.Y. Aug. 7, 2002) ("To the extent that [the plaintiff] seek[s] documents pertaining to testing and analysis of products that are not related to accused . . . products or to the extent that they seek documents pertaining to testing of accused products regarding aspects not covered by the claims, they are overbroad. Since [the plaintiff] has failed to show the relevance of this information, [the plaintiff's] motion to compel is denied and [the defendant] need not produce more than it has agreed to.").

Outside Attorneys' Eyes Only pursuant to a highly restrictive protective order." Mot. to Compel at 15.

The government only waives sovereign immunity to patent infringement suits in limited circumstances based on the "use[] or manufacture[] by or for the United States." 28 U.S.C. § 1498(a). This Court cannot maintain jurisdiction over claims failing to identify the government as the direct infringer. To the extent otherwise relevant documents produced by Elbit contain redactions concerning unrelated products or systems not accused of infringement in plaintiff's complaint, the Court finds such redactions appropriate pursuant to Rule 26(b)(1). Documents and materials concerning such unaccused products or systems are not relevant to plaintiff's claims of infringement against the F-35 fighter helmet under § 1498.

Plaintiff's motion to compel the production of unredacted versions of all documents previously produced in redacted form, as set forth in Supplemental Document Request 12, is denied.

VI. Conclusion

For the reasons stated herein, plaintiff's motion to compel is hereby **GRANTED-IN-PART** and **DENIED-IN-PART**. Elbit shall produce the following documents and materials: (1) the source code for those specifically identified modules requested in Supplemental Document Request Nos. 1–8; and (2) the technical documents requested in Supplemental Document Request 9. Elbit need not produce the technical documents or unreacted versions of previously produced documents requested in Supplemental Document Request Nos. 10–12. The parties shall meet and confer to discuss, amongst other issues, the timing of production, any arrangements necessary for viewing source code, and the efficient identification of source code versions consistent with this Opinion and Order. On or before **1 May 2020** the parties shall submit a joint status report detailing the parties' proposed agreement for the completion of discovery as set forth herein. After the parties submit the joint status report, the Court will hold a status conference to discuss the remaining pending motions.

IT IS SO ORDERED.

s/ Ryan T. Holte
RYAN T. HOLTE
Judge